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ABSTRACT

This document: summarizes how some companies are addressing the design constraints involved in using satellite technology to deliver training, presents a model aimed at examining cost effectiveness of the satellite option, and includes a guide to designing instructional materials for delivery by satellite. A survey of 39 organizations, 12 corporations, and 27 universities provided the data on companies' use of satellite technology, and the data were synthesized using the Subject Matter Analysis technique. A review of the literature resulted in the model. The major finding suggests that there are three major areas of design constraints (presenter, receiving site coordinator, and general logistics) on producing and delivering effective presentations by satellite, the importance of which practitioners are able to rank order. The model developed by the study begins with the program decision, ends with a post-training evaluation, and includes all three areas of design constraints revealed in the survey portion of the study. (The handbook for trainers, appearing as an appendix, addresses what to do about those constraints and includes two worksheets for calculating training costs. A nine-item bibliography is included in the document.) (CML)

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Study Number Eight

A Model to Address Design Constraints of Training Delivered Via Satellite

Joseph Montler
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August 1988

Institute

for

Research in Training and Development

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Development of a Model To Address Design Constraints of Training Delivered Via Satellite

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INTRODUCTION

As a company grows and expands, it may become more difficult to provide training in traditional ways. This may be even more of a problem for companies that are not centrally located. Through the years this problem has been dealt with in several ways: send a training person to each location, distribute video courseware or print based training, phone conferencing, or provide training locally through contracted services. All of these approaches had their advantages and disadvantages.

Today companies have another resource available for delivering training. Many corporations are utilizing satellite television to deliver training to several locations simultaneously. There are numerous advantages to using satellite television in training: immediate feedback from trainees (through a phone conference link), illustrative value of pictures, continuity of message, and in most cases a savings in cost. Although this study does not deal with cost effectiveness of training options it contains an instrument developed by Geroy and Swanson (1987) that can quickly compute the cost benefit of training options. This instrument can be found in the handbook in Appendix A.

From a review of the literature it was seen that instruction by television is an effective option for delivery of training. It was also seen that televised instruction, when compared to the traditional classroom, does not adversely affect the achievement of the students in the television classroom. Students and teachers do not feel cheated by

the television experience. In fact, most have a positive attitude about teaching and learning by television. "Television is a source. As a teaching instrument, it transfers information from television screen to the mind of the individual viewer. Watching television is an individual act of assimilation" (Bruffee 1982, pp. 26-40). However, with its many advantages, training by satellite appeared to have several constraints that needed to be dealt with in order to create an effective presentation. Over the past year WPSX-TV at Penn State University attempted to create a framework to manage these constraints in working on the Penn State Instructional Satellite Network. Specifically, Penn State University identified three critical areas of concern in the creation and management of these satellite courses. The three critical areas were: the presenter, the receiving site coordinator and the general logistics of creating and managing a satellite course. The problem seemed to be the lack of guidelines and aids to deal with these constraints.

The purpose of this study was to review documented processes of organizations that are currently dealing with the delivery of training by this media. The study will determined what has been done and identified concentrations and gaps in the documentation. It drew on the several sources that are provided by the participating organizations. The data was synthesized into a straight-forward handbook designed for the trainer who is faced with contextualizing training designed for classroom delivery for delivery by satellite. For the purpose of this study "designing" does not refer to instructional design, but rather is the activity associated with the

practical problem of taking instruction, that is normally administered in a classroom setting, and preparing it for delivery via television.

This study summarizes how some companies are using satellite technology in their training mix. In addition, this study presents a model to look at cost effectiveness of the satellite option and a guide to designing instructional materials for delivery by satellite.

Research Questions

The following questions were used to guide this study:

1. What are the current design procedures of organizations utilizing satellite delivery to deal with design constraints?

2. What model can be used to guide strategies for dealing with design constraints?

A survey of 39 organizations, 12 corporations and 27 universities was completed during this study. This included a review of the documentation that existed in organizations currently using satellite technology to deliver training. It was this review that produced a model for dealing with the constraints of delivering training via satellite.

METHODOLOGY

In order to fully answer research Question 1, 39 organizations--27 universities and 12 corporations--were surveyed to discover how each organization dealt with design issues for training by satellite. Data was collected from the organizations that were currently involved in the delivery of training and/or instruction by satellite. The data was synthesized using Subject Matter Analysis (Swanson and Gradous 1986, p. 172). This involved a two path approach to analyzing subject matter: one path looked at the literature and the other path looked at organization and practitioner behavior. The two paths were then synthesized into one description.

Participant Selection

Two sources were used to identify organizations to be surveyed. Universities surveyed were contacted through their affiliation with the National Technological University (NTU). Twenty-five of the universities were affiliated with NTU. NTU is a private non-profit institution that offers advance degrees, via satellite, in several technical areas. The university also offers several non-credit courses and seminars over its satellite network. Data was also collected from NTU as a separate organization. The twenty-seventh university was Penn State University.

The second source was used to identify corporations. The January 1988 issue of E-ITV Journal profiled ten corporations in recognition of their excellence in corporate video. All corporations from this profile were contacted to discover if they were involved in satellite training. The companies that were involved in satellite training were

included in the study. The balance of the corporations involved in the study were identified by representatives of the initial survey companies identified in the E-ITV Journal article. This group of companies does not represent all the corporations involved in training by satellite, but does represent companies that are very active in this area.

Procedures

Data was obtained through telephone interviews with each of the organizations. An unstructured interview was conducted with each organization. The unstructured interview approach was used due to the nature of the subject. Because each organization has its own language, especially in media areas, the information sought may have been missed due to terminology differences. The unstructured interview technique also allowed the interviewer to pursue topics that were unique to the responding organizations. Each organization was also asked to share any formal documentation they had developed or used to guide the design of training for delivery by satellite. Specifically, information in the following areas was requested:

Presenter

Documentation to address the problems of acclimating the presenter to the studio environment, tips on delivery style, aids to help the presenter in preparing graphics in television format or planning materials for delivery by satellite.

Receiving Site Coordinator

Documentation on how to set-up a room for satellite signal receiving, how to deal with technical problems, distribution of handouts, proper procedures for the administration of tests, when applicable, or any documentation that dealt with the concerns of the receiving site.

General Logistics

Documentation to address the issues of a satellite presentation as they pertain to the initiation of a satellite event and the administrative responsibilities of the origination site. This would include: program initiation, mailing of handouts, mailing and specific handling of tests, acquiring a location to hold the satellite presentation, providing the necessary equipment or teaching aids as needed at the satellite receiving location or any documentation that dealt with the concerns of general logistics.

FINDINGS

This Chapter summarizes the findings of the study. The Chapter is divided into five major areas. The areas are: General Findings, Presenter, Receiving Site Coordinator, General Logistics and Summary.

General Findings

Of the 39 organizations contacted, 9 provided no response, 15 responded but had no documentation and 15 had some form of documentation. The study concentrated on analyzing procedures and strategies that were documented.

The number of universities with no documentation is significant. Eight of the responding universities had no documentation. In the case of no documentation, all but one of the representatives interviewed said they work with the presenters one-on-one to design their particular materials. When asked specifically about the three issue areas (see Table 1) the university representatives felt that these areas were addressed by their staff but not documented. In one case the representative stated they do not require the presenter to change the way they teach but that it was the job of his personnel to follow the instructor, much like covering a sporting event. When responsible for the receiving site, all representatives stated that they worked with the receiving site coordinators in a group meeting or in some cases one-on-one. If any documentation existed, it was in the form of a letter to the faculty or receiving site coordinators outlining the requirements of their task. These letters were written as needed and did not exist as form letters.

TABLE 1

RESPONDING ORGANIZATION	ISSUE AREAS		
	Presenter Preparation	Receiving Site Coordinator	General Logistics
1	X	X	X
2	X		
3	X	X	X
4	X	X	X
5	X	X	X
6			X
7			X
8	X		
9	X		X
10	X	X	X
11			X
12	X		
13			X
14		X	
15	X	X	

DESIGN ISSUES
CONSENSUS SUMMARY

Seven of the 12 responding corporations did not have any documentation in this area. In the cases of no documentation, three of the corporations used professional talent for a great deal of their work, and when they did use non-professional presenters they worked with them one-on-one. The balance of the corporations with no documentation also worked with presenters one-on-one.

Of the organizations that did have documentation, there were significant patterns in the areas they addressed with their documentation (see Table 1). Table 1 shows that most of the organizations that have documentation have concentrated on the presenter and general logistics but fewer have documentation for the receiving site coordinator. A further breakdown of the three critical issues can be seen in Tables 2, 3 and 4. The data seems to suggest that the three critical issues identified by Penn State University are consistent with other organizations.

Following is a report of the data obtained from the responding organizations. The data is summarized by major issue areas and presented for analysis in two-axis matrices.

Presenter

There are six constraints concerning the presenter that were identified in the study when designing training to be delivered by satellite. The data also suggests there is a rank order for priority to these constraints (see Table 2). The constraints in descending order of importance as determined by the consensus of the responding organizations are:

TABLE 2

RESPONDING ORGANIZATIONS	Television Technical Characteristics Orientation	Graphics Options and Constraints Orientation	Presenter Delivery Style Orientation	Facilities Orientation	Production Planning and Role Definition	Studio Language Orientation
	CONSTRAINTS					
1	X		X	X	X	X
2		X				
3	X		X	X	X	X
4	X	X	X		X	
5	X	X	X		X	
8	X		X	X		
9	X	X	X	X	X	
10	X	X	X	X	X	
12	X	X	X	X	X	X
15		X	X	X	X	

PRESENTER CONSTRAINTS
SUMMARY

TABLE 3

RESPONDING ORGANIZATION	CONSTRAINTS		
	Facilities and Technical Orientation	Pre-Training Event Logistics	Training Event Logistics
1	X	X	X
4	X	X	X
5		X	
10		X	X
14	X	X	X
15	X	X	X

RECEIVING
SITE COORDINATOR
CONSTRAINTS SUMMARY

TABLE 4

RESPONDING ORGANIZATION	CONSTRAINTS		
	Training Event Scheduling	Pre-Event Materials Dissemination	Training Event Evaluation Design
1	X	X	X
3	X	X	X
4	X	X	X
5	X	X	
6	X		
7	X	X	X
9		X	X
10		X	
11		X	
13			X

GENERAL LOGISTICS
CONSTRAINTS
SUMMARY

- Presenter delivery style determination
- Television technical characteristics orientation
- Graphic options and constraints orientation
- Facilities orientation
- Production planning and role definition
- Studio language orientation

Presenter Delivery Style Determination

There were five critical factors identified by the responding organizations for dealing with this constraint (see Table 5). Nine of the responding organizations have addressed these critical factors with documentation. The organizations determined that these critical factors should be addressed in an orientation for the presenter. The descending order of importance as determined by the consensus of the responding organizations is:

- Performance tips
- Clothing tips
- Sequencing materials for television
- Time constraints
- Profile of audience

Television Technical Characteristics Orientation

There were several critical factors identified by the responding organizations for dealing with this constraint (see Table 6). Eight of the responding organizations have documentation in this area. The critical factors are areas of concern that the responding organizations determined needed to be addressed in an orientation for the presenter.

TABLE 5

CRITICAL FACTORS	RESPONDING ORGANIZATIONS								
Performance Tips	X	X	X	X	X	X	X	X	X
Clothing Tips	X	X	X	X	X		X	X	
Sequence of Materials	X	X		X				X	
Time	X	X					X		
Profile of Audience	X	X					X		
	1	3	4	5	8	9	10	12	15

PRESENTER DELIVERY
STYLE DETERMINATION

TABLE 6

CRITICAL FACTORS	RESPONDING ORGANIZATIONS							
Tape Editing								X
Resolution			X		X		X	X
Aspect Ratio			X	X		X	X	X
Tone Scale								X
Satellite Point to Point	X	X						
Point to Multi-point	X	X						
Studio Activity	X	X		X				
Tunnel Vision								
Cropping			X					
	1	3	4	5	8	9	10	12

TELEVISION TECHNICAL
CHARACTERISTICS ORIENTATION

The responding organizations suggested that giving this information to the presenter would create a base knowledge about the technical characteristics of television. A further examination of the data provided by responding organizations shows there are nine critical factors. The descending order of importance as determined by the consensus of the responding organizations is:

- Aspect ratio
- Resolution
- Pre-production studio activity
- Satellite point to point
- Satellite point to multi point
- Tunnel vision
- Cropping
- Grey scale
- Tape editing

Graphic Options and Constraints

There were seven approaches identified by the responding organizations for dealing with this constraint (see Table 7). Of the responding organizations, seven have documentation in this area. The data indicates there are several approaches within these organizations to creating graphics for training by satellite. The consensus of the organizations is that there are seven best approaches to this constraint. In descending order of importance the best approaches are:

- Overhead camera on a writing pad
- Template for television safe graphics
- Graphic artist

- Electronic graphics
- Character generator
- Chalkboard
- Overhead transparencies

Facilities Orientation

The responding organizations identified two approaches for dealing with this constraint. Seven of the responding organizations reported documentation in this area; within that group there were two approaches (see Table 8). In descending order of importance the two approaches are:

- Written description
- Visual description (diagram)

Planning and Role Definition

Eight of the responding organizations distinguished several strategies for dealing with this constraint (see Table 9). Ten strategies were identified. Of the ten strategies, the responding organizations determined that identification of visual resources was the most important strategy. Strategies five through ten were given equal weight by responding organizations. The strategies in descending order of importance as determined by the consensus of the responding organizations are:

- Visual resources available (film/video/slides)
- Outline of legal issues
- Role of producer
- Script

TABLE 7

OPTIONS	RESPONDING ORGANIZATIONS						
Electronic Graphics		X		X		X	
Template for Television Safe Graphics					X	X	
Graphic Artist		X				X	X
Chalkboard			X				X
Overhead Camera on a Writing Pad		X	X	X	X	X	X
Character Generator	X	X			X		
Overhead Transparencies					X		
	2	4	5	9	10	12	15

GRAPHIC OPTIONS
AND CONSTRAINTS
ORIENTATION

TABLE 8

OPTIONS	RESPONDING ORGANIZATIONS						
Written Facilities Description	X	X	X	X	X	X	
Visual Facilities Description (Diagram)						X	X
	1	3	8	9	10	12	15

FACILITIES ORIENTATION

TABLE 9

		RESPONDING ORGANIZATIONS							
STRATEGIES	Role of Producer	X	X		X				
	Visual Resources Available (film/video/slides)	X	X		X	X	X	X	
	Style	X	X						
	Customized Graphics	X	X						
	Outline of Legal Issues			X		X	X	X	X
	Script	X	X		X				
	Rehearsal	X	X						
	Objectives Statement	X	X						
	Planning Checklist	X	X						
	Audience Identification	X	X						
		1	3	4	5	9	10	12	15

PRODUCTIONS PLANNING
AND ROLE
DEFINITION

- Objectives Statement
- Rehearsal
- Audience identification
- Style
- Planning checklist
- Customized graphics

Studio Language Orientation

Three organizations reported documentation in dealing with this constraint. There were 44 separate definitions and very little consensus. Of the 44 definitions, there was consensus on 18 of the definitions by two responding organizations. In all cases of consensus the same two organizations were involved. A list of the terms reported by the responding organizations is presented below. They appear in descending order of importance as determined by the consensus of the responding organizations.

- Audio engineer
- Camera operator
- Character generator
- Director
- Downlink
- Interactive broadcast
- Lighting director
- Origination site
- Roll-in
- Producer
- Control room
- Program open
- Rundown
- Satellite
- Tape operator
- Tech crew
- Teleprompter
- Uplink
- Special effects
- Storyboard
- Broadcast TV
- Closed-circuit

- Cut-off (cropping)
- Grey scale
- Magnetic tape
- Panning
- Tilting
- Presenter
- Projected display (projection)
- Reverse phasing
- Rear screen projection
- Film chain
- Split screen effects
- Key lights
- Fade-in/out
- Dissolve
- Zoom
- Cue
- Time cue
- Overhead camera
- Resolution
- Dollying
- Trucking
- Wipe

Receiving Site Coordinator

There were three constraints concerning the receiving site coordinator when designing training for delivery by satellite which the organizations determined should be addressed when orienting the receiving site coordinator. Six organizations responded that they had documentation in this area. The data also suggests a rank order of priority of the constraints. In descending order of importance they are:

- Pre-training event logistics
- Training event logistics
- Facility and technical orientation

Pre-training Event Logistics

Six critical factors were identified by the responding organizations concerning this constraint (see Table 11). All six of

TABLE 10

		RESPONDING ORGANIZATIONS			
CRITICAL FACTORS	Introduction to Organization	X	X	X	X
	Satellite Technology Orientation	X	X	X	X
	Equipment Orientation	X	X		
		1	4	14	15

FACILITY AND
TECHNICAL ORIENTATION

TABLE 11

		RESPONDING ORGANIZATIONS					
CRITICAL FACTORS	Handout Distribution		X		X		X
	Room Set-up and Operation	X	X			X	X
	Meeting Room Confirmation	X				X	
	Registration Procedures	X		X		X	X
	Text Ordering		X		X	X	
	Ordering of Food and Beverage	X					
		1	4	5	10	14	15

PRE-TRAINING
EVENT LOGISTICS

the organizations with documentation concerning the receiving site coordinator have addressed this area. The organizations determined that handout distribution, room set-up and registration are most critical of the pre-event logistics. The critical factors in descending order of importance are:

- Handout distribution
- Room set-up and operation
- Registration procedures
- Text ordering
- Meeting room confirmation
- Ordering of food and beverage

Training Event Logistics

The responding organizations identified five critical factors concerning this constraint (see Table 12). Five of the organizations reported documentation in this area. The organizations determined that these critical factors needed addressed in order to handle event logistics. The factors, in descending order of importance as determined by the consensus of the responding organizations are:

- Event proctoring
- Troubleshooting technical problems
- Videotaping
- Participant question procedures
- Student evaluation procedures

TABLE 12

		RESPONDING ORGANIZATIONS				
CRITCAL FACTORS	Event Proctoring	X	X		X	X
	Troubleshooting Technical Problems	X	X			X
	Videotaping	X			X	X
	Participant Question Procedures	X	X			X
	Student Evaluation Procedures			X		
		1	4	10	14	15

TRAINING EVENT LOGISTICS

Facility and Technical Orientation

The responding organizations identified several critical facility and technical factors concerning the receiving site coordinators (see Table 10). The organizations determined that these factors should be included in the receiving site coordinator's orientation. Of the four respondents in this area, three critical factors were identified. In descending order of importance they are:

- Introduction to the organization
- Satellite technology orientation
- Equipment orientation

General Logistics

Three constraints were identified concerning general logistics. In the design of training by satellite the ten responding organizations determined that these constraints needed addressed. They are:

- Pre-event materials dissemination
- Training event scheduling
- Training evaluation design

Pre-event Materials Dissemination

The responding organizations identified three critical factors and two options in this area (see Table 13). The critical factors in descending order of importance as determined by the consensus of the responding organizations are:

- Mailing procedures
- Text ordering
- Timeline for mailing materials

TABLE 13

		RESPONDING ORGANIZATIONS							
OPTIONS	Mailing Procedures				X	X	X	X	X
	(Mailing Option 1) Presenters Responsibility	X	X	X	X				
	(Mailing Option 2) Organization Responsibility					X	X	X	X
	Text Ordering			X	X				
	Timeline for Mailing			X					X
		1	3	4	5	7	9	10	11

PRE-EVENT
MATERIALS DISSEMINATION

The organizations also identified two options within the mailing procedures. The options are: to designate either the presenter or the organization responsible for the mailing of event materials. On this point the responding organizations were evenly split with four of the respondents designating the presenter and four of the respondents designating the organization to handle mailing procedures (see Table 13).

Training Event Scheduling

Six of the responding organizations reported having documentation to address some of these procedures (see Table 14). From this documentation eight procedures were identified. In descending order of importance they are:

- Program initiation procedures
- Schedule studio facility
- Schedule conference bridge
- Schedule receive site meeting room
- Schedule remote site equipment
- Schedule satellite (uplink & downlink) and transponder
- Set fee
- Promotional materials

Training Evaluation Design

Six of the responding organizations stated that they did design evaluation instruments for evaluating their programs (see Table 15).

TABLE 14

		RESPONDING ORGANIZATIONS					
PRODUCTION DEVELOPMENT PROCEDURES	Program Initiation Procedures	X	X	X	X	X	X
	Set Fee					X	X
	Schedule Satellite (Uplink and Downlink) and Transponder	X	X				
	Schedule Conference Bridge	X	X	X			
	Schedule Receive Site Meeting Room	X	X		X		
	Schedule Studio Facility	X	X				X
	Schedule Receiving Site Equipment	X	X	X			
	Promotional Materials			X			X
		1	3	4	5	6	7

TRAINING EVENT
SCHEDULING

TABLE 15

		RESPONDING ORGANIZATIONS					
OPTIONS	Content	X	X	X			
	Presenter	X	X	X			
	Visuals	X	X	X	X	X	
	Facilities	X	X	X	X	X	X
	Technical	X	X	X	X	X	X
		1	3	4	7	9	13

TRAINING
EVALUATION DESIGN

These six organizations have determined that there are five approaches in evaluating the success of a program. The five approaches in descending order of importance are:

- Technical
- Facilities
- Visuals
- Presenter
- Content

SUMMARY AND CONCLUSIONS

The objective of this study was to develop a model to address design constraints of training delivered by satellite. In order to facilitate this, two research questions were developed. They were:

1. What are the current design procedures of organizations utilizing satellite delivery to deal with design constraints?

2. What model can be used to guide strategies for dealing with design constraints?

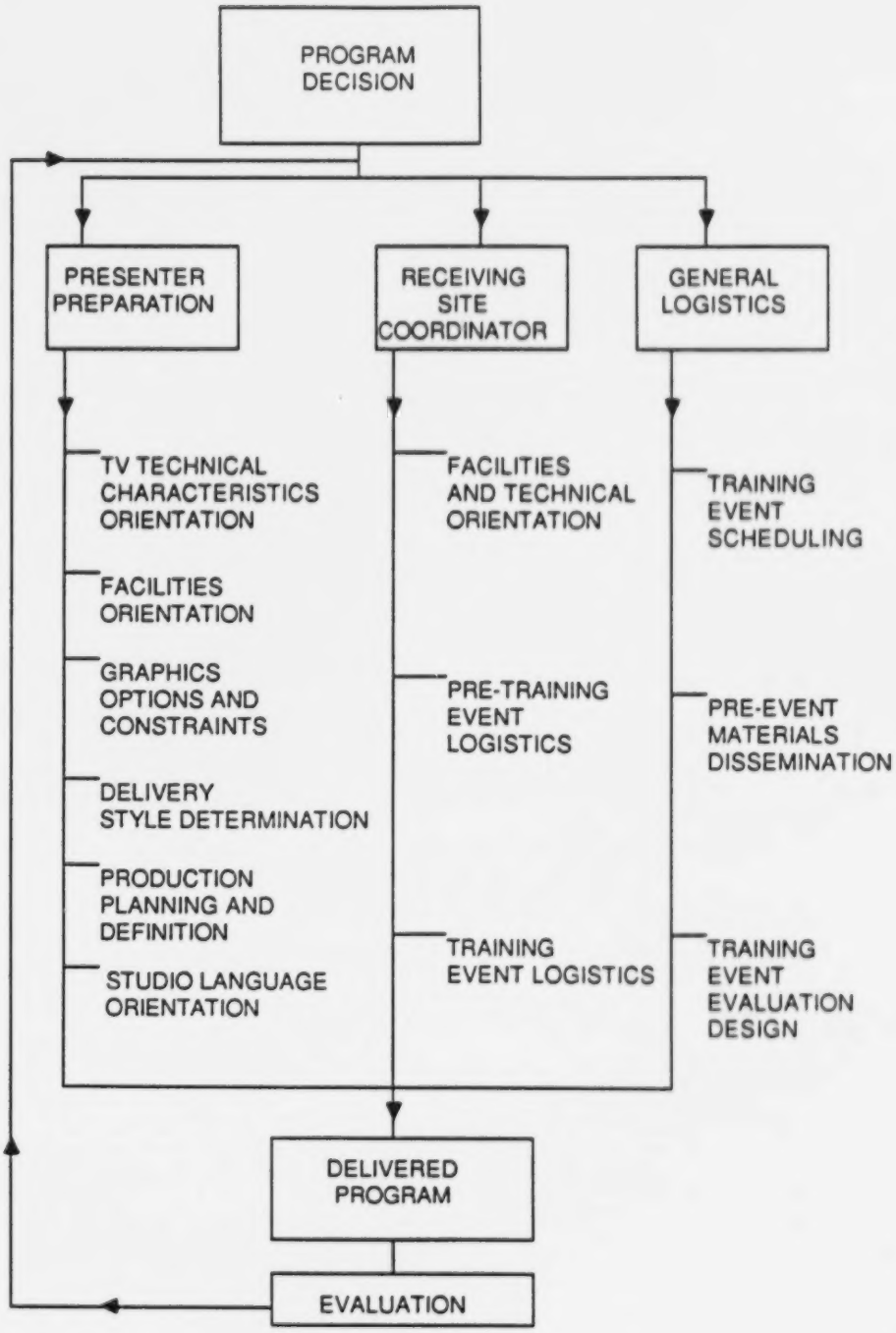
To answer these questions a review of the literature and a survey of 39 organizations was completed. In answer to Question 1, several constraints have been identified and there seems to be existing procedures in organizations using satellite technology for training to address these constraints, although reports or research do not exist in the literature. Support for the effectiveness of teaching via television does exist in the literature. This finding is also important because it is the foundation for the decision to use television as a training tool. To find documentation that identifies constraints and design procedures to deal with constraints, one needs to look at the survey of organizations currently working in this area which has been reported in this study. The results of the survey indicatethat there are existing procedures to deal with these design constraints.

The findings also suggest that there are three major areas of design constraint issues. They include: presenter, receiving site coordinator and general logistics. Within each of these issue areas there seems to be constraints that need to be addressed in order to

create an effective presentation. Furthermore, there seems to be a rank order of concern regarding these constraints (see Tables 2-4).

In answer to Question 2, the data suggests that there is, in fact, a model which can be developed to guide a process for using existing personnel and training content for effective delivery via satellite (see Figure 1). The model begins with the program decision and ends with a post-event training evaluation. In addition, this study has resulted in a handbook to assist practitioners in going through the model. This handbook is presented in Appendix A.

FIGURE 1



SATELLITE DELIVERED
TRAINING DESIGN
CONSTRAINTS MODEL

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Appendix A

HANDBOOK FOR TRAINERS TO ADDRESS DESIGN CONSTRAINTS OF DELIVERING TRAINING VIA SATELLITE

HANDBOOK FOR TRAINERS
TO ADDRESS DESIGN CONSTRAINTS
OF DELIVERING TRAINING
VIA SATELLITE

By

Joseph A. Montler

There are several considerations to make when taking existing training and delivering it via satellite. This handbook is a guide for trainers to address the constraints of television. It will also help the trainer make use of the unique advantages of television. The model seen below constitutes the basic structure of this handbook.

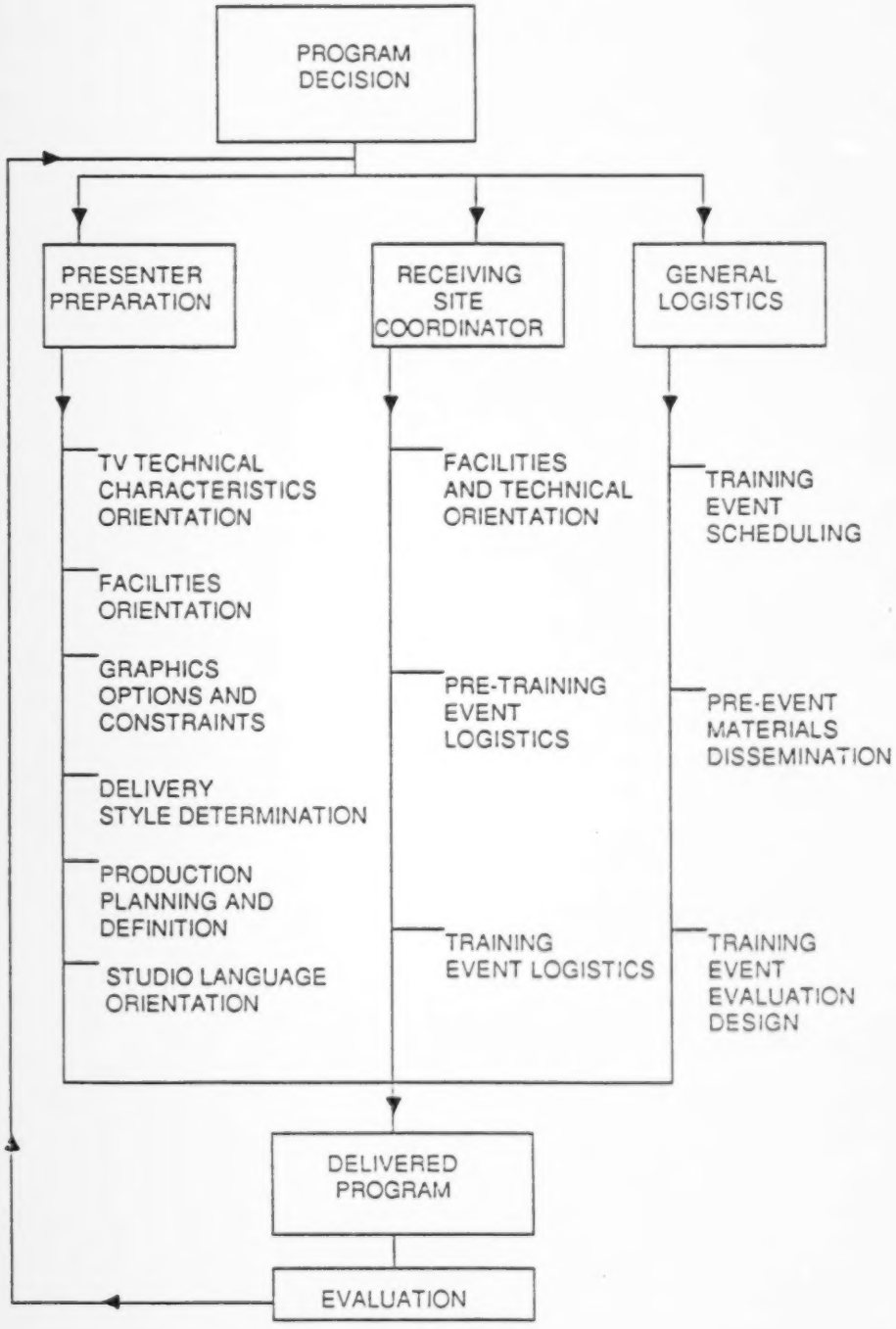
There are three major issues to consider when designing training for delivery by satellite. They are: the presenter, the receiving site coordinator and the general logistics of creating a satellite program. This handbook is designed to be a skeletal framework that each trainer will use to build their particular training event around. It offers flexibility for the trainer to choose some or all of the outlined strategies to meet their organizations specific needs and situations. This handbook will consider each of the design issue areas separately.

Presenter

The presenter is the person who stands in front of the camera and delivers the training material. There are six constraints that need to be addressed for the presenter in order to create an effective presentation. The topics under each heading will be offered in descending order of importance.

Television Technical Characteristics Orientation

Defining television characteristics for the presenter will help the presenter understand the technical peculiarities of television. This is an orientation activity. The orientation should include the following topics:



SATELLITE DELIVERED
TRAINING DESIGN
CONSTRAINTS MODEL

- Aspect ratio
- Resolution
- Description of pre-production studio activity
- Satellite point to point transmission
- Satellite point to multi-point transmission
- Tunnel vision
- Cropping
- Grey scale
- Videotape editing

Graphic Options and Constraints

In order for the presenter to take full advantage of the studio environment a graphics options list should be made available to the presenter. This is a list of options for the presenter which describes their characteristics, strengths and weaknesses. The presenter should be aware of the following list as it pertains to the originating facility:

- Overhead camera on a writing pad
- Template for television safe graphics
- Graphic artist
- Electronic graphics
- Character generator
- Chalkboard
- Overhead transparencies

Presenter Delivery Style

Presenting on television is much different than presenting in a classroom. This section offers topics for preparing the presenter for

this experience. This is an orientation activity. The orientation should include the following topics:

- Performance tips
- Clothing tips
- Sequencing materials for television
- Time constraints
- Profile of audience

Facilities Orientation

It is important for the presenter to understand the working environment in order to utilize it fully. This is an orientation activity. The orientation should describe the studio facility in one or both of the following manners:

- Written description
- Visual description (diagram)

Planning and Role Definition

A presentation in any situation needs careful planning. This is especially true in a studio situation because the presenter must act in concert with the technical crew and director. The presenter must also be aware of a much tighter time frame in a satellite situation. This is an orientation activity. The orientation should include the following topics:

- Visual resources available (film/video/slides)
- Outline of legal issues
- Role of producer
- Scripts

- Objectives statement
- Rehearsal
- Audience identification
- Production style
- Planning checklist
- Customized graphics

Studio Language Orientation

Studios have a highly developed language that can be very confusing to the presenter who is new to the studio environment. In order to function in this environment the presenter needs to understand the language. This is an orientation activity. The presenter should become familiar with a glossary of studio terms which will allow him/her to communicate in the studio environment. Some of the following terms may be included:

- Audio engineer
- Camera operator
- Character generator
- Director
- Downlink
- Interactive broadcast
- Lighting director
- Origination site
- Roll-in
- Producer
- Control room
- Program open
- Rundown
- Satellite
- Tape operator
- Technical crew
- Teleprompter
- Uplink
- Special effects
- Storyboard
- Broadcast television
- Closed-circuit
- Cut-off (cropping)
- Grey scale
- Magnetic tape
- Panning
- Tilting
- Presenter
- Projected display
- Reverse phasing
- Rear screen projection
- Film chain
- Split screen effects
- Key light
- Fade in/out
- Dissolve
- Zoom
- Cue
- Time cue
- Overhead camera
- Resolution
- Dollying
- Trucking
- Wipe

Receiving Site Coordinator

The receiving site coordinator is the person respondible for all issues regarding the receiving site for the satellite training event. This usually will involve several diversely located people since most satellite training programs are received by several sites simultaneously. There are three constraints that need to be addressed concerning the receiving site coordinator.

Facility and Technical Training

Because the receiving site coordinator is the eyes and ears of the trainer at the receiving location, it is important that this person have a full grasp of the organization, i.e. training department, the technology and the equipment needs for the receiving site. This is an orientation activity. The orientation should include the following topics:

- Introduction to the sponsoring organization
- Satellite technology orientation
- Equipment orientation

Pre-training Event Logistics

In order to insure a smooth running event, the receiving site coordinator should fully understand their responsibilities. This is a training activity. The receiving site coordinator should be given procedures for the following activities:

- Handout distribution
- Room set-up and operation

- Registration procedures
- Text ordering
- Meeting room confirmation
- Food and beverage ordering

Training Event Logistics

To insure that the event will not be dominated by logistical and technical questions or problems, the receiving site coordinator should understand the procedures for running the event from his/her end. This is a training activity.

The receiving site coordinator should be given instructions in the following areas:

- Event proctoring
- Troubleshooting
- Videotaping
- Participant question procedures
- Student evaluation procedures

General Logistics

General logistics are the activities that are generally handled from the origination site. It deals with the logistics of initiating and maintaining a training satellite event. The person acting as producer of the event is usually respondible for these activities. There are three constraints that must be addressed in order to create an effective presentation.

Training Event Scheduling

The logistical consideration around scheduling a training event for satellite delivery are crucial to the success of the event. If one link is missing, the entire event may crumble. Consider the following carefully. These are logistical activities that must be considered within the context of the event:

- Program Initiation procedures
- Scheduling of studio facility
- Scheduling of receiving meeting room
- Scheduling of receiving site equipment
- Scheduling satellite (uplink and downlink) and transponder
- Setting fee
- Promotional materials

Pre-event Materials Dissemination

Materials are of no use if they arrive the day after the event. Therefore, it is important to establish mailing procedures early in the planning stage. This is a logistical activity. These activities must be considered within the context of the event:

- Mailing procedures
- Text ordering
- Timeline for mailing materials

Training Evaluation Design

It cannot be assumed that any training event was successful unless an evaluation of some nature is done. This is even more important in a

satellite event because of all the variables that may contribute to the success or demise of the event. These are evaluation options. The need for evaluation in any of these areas should be considered within the context of the event. They are:

- Technical
- Facilities
- Visuals
- Presenter
- Content

Cost-Benefit of Training

As an aid to comparing the cost of satellite delivered training to other training options, a model for determining cost-benefit is offered in this handbook (see Figure 2). The Benefit Forecasting Model was developed by Dr. Richard Swanson and Dr. Gary Geroy for making a cost-benefit comparison of different training options. The model uses worksheets to guide practitioners through the process of determining the most cost effective training option (see Tables 16 and 17). This model is an excellent guide for trainers in determining a training strategy.

Summary

The purpose of this handbook is to serve as a guide for dealing with the constraints of designing training for delivery by satellite. It is deliberately skeletal due to the unique nature of each studio facility, sponsoring company and each training event. As a handbook it is a schematic by which to construct the design and activities to support effective satellite training.

FIGURE 2

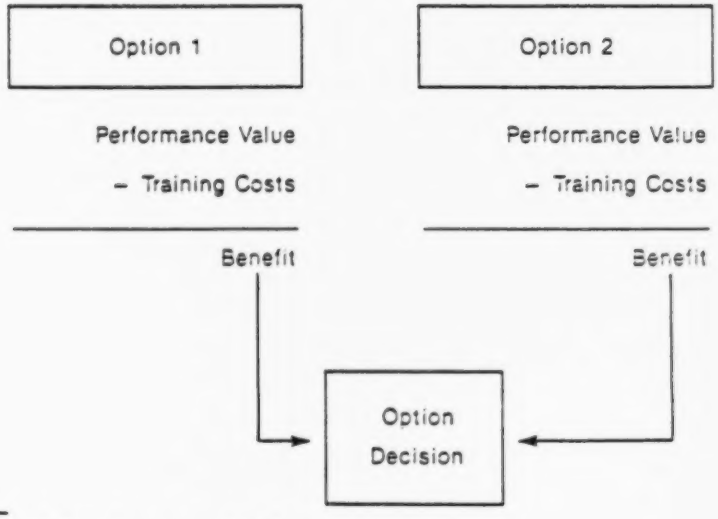


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TABLE 16

Work Sheet for Analyzing Training Costs

Training Phases	Training Options *Commerical*	*In-House*
Analysis		
Needs Assessment	$ _____	$ _____
Work Analysis	_____	_____
Design		
Program	_____	_____
Instructional Aids	_____	_____
Development		
Pilot Testing	_____	_____
Formative Evaluation	_____	_____
Instructional Aids	_____	_____
Implementation		
Delivery	_____	_____
Management	_____	_____
Evaluation		
Summative Evaluation	_____	_____
Training Revision	_____	_____
Maintenance of Trainee Behavior	_____	_____
Total (A)	$ _____	$ _____
Number of Trainees (B)	_____	_____
Cost Per Trainee $\frac{(A)}{(B)}$	$ _____	$ _____

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Performance-Value Calculation Work Sheet for Circuit-Board Training

Data Required for Calculations	Option 1 Unstructured	Option 2 Commercial	Option 3 In-House
a. What is the desired performance goal as a result of worker training?			
b. What unit(s) of measure will be used to describe the performance?			
c. What is the dollar value that will be assigned to each unit of measure?			
d. What is the estimated training time to reach the goal?			
e. What is the current level of worker performance?			
f. How many workers will participate in the training?			
Calculations to Determine Net Performance Value			
g. What is the estimated performance level during training? Will trainee produce during training? No = 0 Yes = $\frac{a + e}{2}$			
h. What is the length of the period being evaluated? (At a minimum, this will be the longest "d" of all options under consideration.)			
i. What is the estimate of the total number of units (b) that will be achieved during training? (d x g)			
j. What is the estimate of the total performance per individual for the evaluation period? [(h − d) x a] + i			
k. What is the value for the total performance for the evaluation period? (c x j)	$	$	$
l. What is the net performance value gain? [k − (e x c x h)]	$	$	$
m. Do you want to calculate the total net performance value of all trainees? Yes [ ] = (f x l) No [ ] = Net performance value of one trainee which is calculated value of (l)	$	$	$

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